

5.5 TRAFFIC AND CIRCULATION

5.5.1 Introduction/Methodology

FSEIR #01-01 addressed the traffic and circulation impacts for the development of the entire Woods and Vistas neighborhoods. Table 4.2-8a in FSEIR #01-01 indicates that 18.7 acres of Commercial Tourist land use and a volume of 3,700 ADT was assumed for the proposed project site. This table further shows that a total of 22,520 ADT would be generated from buildout of the entire Vistas planning area. Mitigation measures were required for the traffic impacts of the entire EastLake III SPA. One of these mitigation measures required preparation of project-specific traffic analyses at the time of specific project planning. The Traffic Impact Analysis for the EastLake Seniors Residential Community was prepared by Linscott, Law and Greenspan (LLG, August 16, 2005) fulfills this mitigation requirement. The LLG Traffic Impact Analysis is included as *Appendix D* to this EIR. The Traffic Impact Analysis is summarized below.

This section consists of a summary of existing traffic and transportation facility conditions, anticipated traffic impacts and applicable mitigation measures to reduce impacts to a level below significance.

5.5.2 Existing Conditions

Existing Street System

The principal roadways in the project study area are described below. The study area was selected base on the project traffic distribution, which was determined using a Select Zone Assignment (SZA) obtained for the project from SANDAG. The description includes the physical characteristics, adjacent land uses, and intersection traffic control.

Olympic Parkway is classified as a Six-lane Prime Arterial from I-805 to Hunte Parkway, and is a Four-Lane Major east of Hunte Parkway in the City of Chula Vista Circulation Plan. Currently, it is built to its ultimate classification. On-street parking is prohibited. The posted speed limit is 45 mph. Bike lanes are provided. A raised median is provided along Olympic Parkway between Wueste Road and the Olympic Training Center driveway. A median opening is proposed as part of the project. Existing Average Daily Trip (ADT) volumes were collected along three segments of Olympic Parkway in January 2005. The ADT volumes for these three segments are shown in *Table 5.5-1, Year 2005 Street Segment Volumes*.

TABLE 5.5-1
Year 2005 Street Segment Volumes

Segment	ADT
<i>Olympic Parkway</i>	
East Palomar St. to EastLake Parkway	25,400
EastLake Parkway to Hunte Parkway	10,700
Hunte Parkway to Wueste Road	6,000

Source: LLG Report. August 16, 2005.

Wueste Road is classified as a Two-Lane Class III Collector in the project vicinity. No direct access is provided to the project via Wueste Road.

Existing Street Segment Operations

The street segments were analyzed on a daily basis by comparing the ADT to the Chula Vista Standard Street Classification Table, as shown in Appendix B of the Traffic Impact Analysis. *Table 5.5-3, Existing Street Segment Operations*, summarizes the existing daily segment operations. As seen in *Table 5.5-2, Existing Street Segment Operations*, all segments in the study area currently operate at LOS C or better.

TABLE 5.5-2
Existing Street Segment Operations

Street Segment	Existing Classification	LOS "C" Capacity	Existing Without Project	
			ADT	LOS
Olympic Parkway				
East Palomar St. to EastLake Parkway	Prime Arterial (6L)	50,000	25,400	C
EastLake Parkway to Hunte Parkway	Prime Arterial (6L)	50,000	10,700	C
Hunte Parkway to Wueste Road	Major Arterial (4L)	30,000	6,000	C

Source: LLG Report. August 16, 2005.

Existing Intersection Operations

A total of eight intersections were identified in the study area. Existing AM and PM peak hour traffic counts were conducted at five intersections in the project vicinity. The remaining three

intersections (Olympic Parkway/SR-125 SB Ramps, Olympic Parkway/SR-125 NB Ramps and Olympic Parkway/Project Driveway) do not currently exist, and therefore are included in the analysis of “future” scenarios. Existing weekday traffic volumes are shown in *Figure 5.5-1, Existing Traffic Volumes (AM/PM Peak Hours and ADT’s)*. Existing intersection operations for the following intersections are shown in *Figure 5.5-1, Existing Traffic Volumes (AM/PM Peak Hours and ADT’s)*:

- Olympic Parkway/East Palomar Street
- Olympic Parkway/EastLake Parkway
- Olympic Parkway/Hunte Parkway
- Olympic Parkway/Olympic Vista Road
- Olympic Parkway/Wueste Road

As shown in *Table 5.5-3, Existing Intersection Operations*, all of the analyzed intersections in the study area were calculated to operate at LOS C or better in their existing condition. Currently, a traffic signal is installed at Olympic Parkway/Wueste Road intersection but was not operational at the time the Traffic Impact Analysis was prepared, and therefore was analyzed as an unsignalized intersection.

TABLE 5.5-3
Existing Intersection Operations

Intersection	Control	Peak Hour	Existing	
			Delay ^a	LOS ^b
1) Olympic Parkway/East Palomar Street	Signalized	AM PM	29.0 25.1	C C
2) Olympic Parkway/EastLake Parkway	Signalized	AM PM	26.5 27.4	C C
3) Olympic Parkway/Hunte Parkway	Signalized	AM PM	27.4 26.6	C C
4) Olympic Parkway/Olympic Vista Road	Signalized	AM PM	32.3 27.8	C C
5) Olympic Parkway/Wueste Road	Signalized	AM PM	18.5 20.3	B C

Footnotes:

- Average delay in seconds per vehicle.
- Level of Service

Source: LLG Report. August 16, 2005.

Figure 5.5-1 Existing Traffic Volumes (AM/PM Peak Hours and ADTs).

Regulatory Framework

The Congestion Management Program (CMP) was first adopted on November 22, 1991, and is intended to directly link land use, transportation and air quality through Level of Service performance. Local agencies are required by statute to conform to the CMP.

The CMP requires an Enhanced CEQA review for all large projects that are expected to generate more than 2,400 ADT or more than 200 peak hour trips. Since the project is calculated to generate over 200 peak hour trips, this level of review is required of the proposed project.

In 1993, the Institute of Transportation Engineers California Border Section and the San Diego Region Traffic Engineer's Council established a set of guidelines to be used in the preparation of traffic impact studies that are subject to the Enhanced CEQA review process. These guidelines were updated in January 2003. The published document is titled *2002 Congestion Management Program Update*. The guidelines require that a project study area be established as follows:

- All streets and intersections on CMP roadways where the project will add 50 or more peak hour trips in either direction.
- Mainline freeway locations where the project will add 150 or more peak hour trips in either direction.

5.5.3 Thresholds of Significance

Traffic impacts are defined as either project specific impacts or cumulative impacts. Project specific impacts are those impacts for which the addition of project trips results in an identifiable degradation in level of service on freeway segments, roadway segments, or intersections, triggering the need for specific project-related improvement strategies. Cumulative impacts are those in which the project trips contribute to a poor level of service, at a nominal level.

Study horizon year describes a future period of time that corresponds to SANDAG's traffic model years, and are meant to synchronize study impacts to be in line with typical study years of 2005, 2010, 2015 and 2030.

The measure of effectiveness for intersection operations is Level of Service (LOS). In the 2000 Highway Capacity Manual (HCM), LOS for signalized intersections is defined in terms of delay. The LOS analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

For signalized intersections, LOS criteria are stated in terms of average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement. *Table 5.5-4, Level of Service Thresholds for Signalized and Unsignalized Intersections*, depicts the LOS criteria for both signalized and unsignalized intersections.

TABLE 5.5-4
Level of Service Thresholds for Signalized and Unsignalized Intersections

LOS	Signalized Intersections	Unsignalized Intersections	
	Average Control Delay per Vehicle (Seconds/Vehicle)	Average Control Delay per Vehicle (Seconds/Vehicle)	Expected Delay to Minor Street Traffic
A	$0.0 \leq 10.0$	$0.0 \leq 10.0$	Little or no delay
B	10.1 to 20.0	10.1 to 15.0	Short traffic delays
C	20.1 to 35.0	15.1 to 25.0	Average traffic delays
D	35.1 to 55.0	25.1 to 35.0	Long traffic delays
E	55.1 to 80.0	35.1 to 50.0	Very long traffic delays
F	≥ 80.0	≥ 50.0	Severe congestion

Source: LLG Report. August 16, 2005.

Criteria for determining whether the project results in either project specific or cumulative impacts on freeway segments, roadway segments, or intersections are as follows:

Short-Term (Study Horizon Year 0 to 4)

For purposes of the short-term analysis roadway sections may be defined as either links or segments. A link is typically that section of roadway between two adjacent Circulation Element intersections, and a segment is defined as that combination of contiguous links used in the Growth Management Plan Traffic Monitoring Program. Analysis of roadway links under short-term conditions may require a more detailed analysis using the Growth Management Oversight Committee (GMOC) methodology if the typical planning analysis using volume to capacity ratios on an individual link indicates a potential impact to that link. The GMOC analysis uses the Highway Capacity Manual (HCM) methodology of average travel speed based on actual measurements on the segments as listed in the Growth Management Plan Traffic Monitoring Program.

Intersections

- a) Project specific impact if both the following criteria are met:
 - i. Level of service if LOS E or LOS F.
 - ii. Project trips comprise 5% or more of entering volume.
- b) Cumulative impact if only (i) is met.

Street Links/Segments

If the planning analysis using the volume to capacity ratio indicated LOS C or better, there is no impact. If the planning analysis indicates LOS D, E or F, the GMOC method should be utilized. The following criteria would then be utilized:

- a) Project specific impact if all the following criteria are met:
 - i. Level of service is LOS D for more than 2 hours or LOS E/F for 1 hour
 - ii. Project trips comprise 5% or more of segment volume.
 - iii. Project adds greater than 800 ADT to the segment.
- b) Cumulative impact if only (i) is met.

Freeways

- a) Project specific impact if all the following criteria are met:
 - i. Freeway segment LOS is LOS E or LOS F
 - ii. Project comprises 5% or more of the total forecasted ADT on that freeway segment.
- b) Cumulative impact if only (i) is met.

Long-term (Study Horizon Year 5 and Later)***Intersections***

- a) Project specific impact if all the following criteria are met:
 - i. Level of service is LOS E or LOS F.
 - ii. Project trips comprise 5% or more of entering volume.
- b) Cumulative impact if only (i) is met.

Street Links/Segments

Use the planning analysis using the volume to capacity ratio methodology only. The GMOC analysis methodology is not applicable beyond a four-year horizon.

- a) Project specific impact if all the following criteria are met:
 - i. Level of service is LOS D, LOS E or LOS F.
 - ii. Project trips comprise 5% or more of total segment volume.
 - iii. Project adds greater than 800 ADT to the segment.
- b) Cumulative impact if only (i) is met. However, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is considered not significant since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If segment Level of Service is LOS F, impact is significant regardless of intersection LOS.
- c) Notwithstanding the foregoing, if the impact identified in paragraph a. above occurs at study horizon year 10 or later, and is offsite and not adjacent to the project, the impact is considered cumulative. Study year 10 may be that typical SANDAG model year which is between 8 and 13 years in the future. In this case of a traffic study being performed in the period of 2003 to 2004, because the typical model will only evaluate traffic at years divisible by 5 (i.e. 2005, 2010, 2015 and 2020). Year 2010 is only 5 years in the future. Since the model year is less than 7 years in the future, study horizon year 10 (Year 2015) is 11 years in the future.
- d) In the event a direct identified project specific impact in paragraph a. above occurs at study horizon year 5 or earlier and the impact is offsite and not adjacent to this project, but the property immediately adjacent to the identified project specific impact is also proposed to be developed in approximately the same time frame, an additional analysis may be required to determine whether or not the identified project specific impact would still occur if the development of the adjacent property does not take place. If the additional analysis concludes that the identified project specific impact is no longer a direct impact, then the impact shall be considered cumulative.

Freeway Analysis

- a) Project specific impact if all the following criteria are met:
 - i. Freeway segment LOS is LOS E or LOS F
 - ii. Project comprises 5% or more of the total forecasted ADT on that freeway segment.
- b) Cumulative impact if only (i) is met.

5.5.4 Environmental Impacts

Trip Generation

SANDAG rates for retirement communities were determined to be the most applicable rates for the proposed project. *Table 5.5-5, Trip Generation Summary – Proposed Project* tabulates the proposed project's trip generation based on SANDAG Rates.

TABLE 5.5-5
Trip Generation Summary – Proposed Project

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour				PM Peak Hour			
		Rate ^a	Volume	% of ADT	IN:OUT split	Volume		% of ADT	IN:OUT split	Volume	
						In	Out			In	Out
Retirement Community	494 Units	4/unit	1,976	5%	4:6	40	59	7%	6:4	83	55

Footnotes:

- a) Rates based on SANDAG's "Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region", April 2002.

Source: LLG Report. August 16, 2005.

As shown in *Table 5.5-5*, the proposed project is expected to generate approximately 1,976 ADT with 40 inbound / 59 outbound trips during the AM peak hour and 83 inbound / 55 outbound trips during the PM peak hour.

Table 5.5-6, Trip Generation Summary – Adopted Land Uses summarizes the trip generation for the adopted land use. As discussed in Section 5.1, the adopted land use for the site is Tourist Commercial. Specific rates are not available for Tourist Commercial, therefore the daily rates for "specialty retail" was used. As seen in *Table 5.5-6, Trip Generation Summary – Adopted Land Uses*, the adopted land use is calculated to generate approximately 3,660 ADT with 110 trips during the AM peak hour (66 inbound / 44 outbound) and 330 trips during the PM peak hour (165 inbound / 165 outbound).

FSEIR #01-01 used a trip generation rate of 3,700 ADT for the Tourist Commercial land use. The traffic analysis conducted by LLG and summarized in this section utilized the 3,660 ADT figure for the adopted land use because it would result in a more accurate comparison to the proposed project. Thus, the proposed project is calculated to generate approximately 1,680 less ADT with 11 fewer trips during the AM peak hour and 192 fewer trips during the PM peak hour than assumed for the adopted land use.

TABLE 5.5-6
Trip Generation Summary – Adopted Land Uses

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour				PM Peak Hour			
		Rate ^a	Volume	% of ADT	IN:OUT split	Volume		% of ADT	IN:OUT split	Volume	
						In	Out			In	Out
Adopted Land Uses Tourist Commercial	18.3 Acres	400/acre	3,660	3%	6:4	66	44	9%	5:5	165	165

Footnotes:

- a) Rates based on SANDAG's "Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region", April 2002. No specific rate is available for "Tourist Commercial" land uses, therefore 50% of the "Specialty Retail" daily rates was used.

Source: LLG Report. August 16, 2005.

Trip Distribution/Assignment

The project-generated traffic was distributed and assigned to the street system based on site access parameters, roadway system characteristics, and a SANDAG Select Zone Assignment Model. *Figure 5.5-2, Regional Traffic Distribution without SR-125*, depicts the estimated project traffic distribution without SR-125, and *Figure 5.5-3, Regional Traffic Distribution with SR-125*, depicts the proposed traffic distribution with SR-125.

Analysis of Near-term Scenarios

The following scenarios were analyzed for the proposed project:

- Scenario 1 – Year 2006 without SR-125 with 5% Growth and No Project
- Scenario 2 – Year 2006 without SR-125 with 5% Growth and with Project
- Scenario 3 – Year 2010 with SR-125 and with Adopted Land Uses
- Scenario 4 – Year 2010 with SR-125 and with Proposed Project Land Uses
- Scenario 5 – Buildout with SR-125 and with Adopted Land Uses
- Scenario 6 – Buildout with SR-125 and with Proposed Project Land Uses

Scenario 1 – Year 2006 without SR-125 with 5% Growth and No Project

Scenario 1 traffic volumes were obtained by adding a 5% growth factor to the existing traffic volumes. *Figure 5.5-4, Year 2006 Without Project Traffic Volumes AM/PM Peak Hours and ADT's*, depicts the Scenario 1 traffic volumes on road segments and at key intersections. *Table*

Figure 5.5-2 Regional Traffic Distribution without SR-125

Figure 5.5-3 Regional Traffic Distribution with SR-125

Figure 5.5-4, Year 2006 Without Project Traffic Volumes AM/PM Peak Hours and ADT's

5.5-7, *Near-Term Intersection Operations*, summarizes the peak hour intersection operations for this scenario. As seen in *Table 5.5-7, Near-Term Intersection Operations*, with the addition of the 5% growth factor, all key signalized intersections are calculated to continue to operate at LOS D or better conditions.

TABLE 5.5-7
Near-Term Intersection Operations

Intersection	Peak Period	Existing		Scenario 1 (Year 2006 Without Project)		Scenario 2 (Scenario 1 With Proposed Project)	
		Delay ^a	LOS ^b	Delay	LOS	Delay	LOS
1) Olympic Parkway/ East Palomar Street	AM	29.0	C	37.3	D	37.3	D
	PM	25.1	C	29.0	C	29.0	C
2) Olympic Parkway/ SR-125 SB Ramps	AM	C	C	C	C	C	C
	PM	C	C	C	C	C	C
3) Olympic Parkway/ SR-125 NB Ramps	AM	C	C	C	C	C	C
	PM	C	C	C	C	C	C
4) Olympic Parkway/ EastLake Parkway	AM	26.5	C	27.9	C	28.1	C
	PM	27.4	C	28.1	C	28.0	C
5) Olympic Parkway/ Hunte Parkway. ^d	AM	27.4	C	23.9	C	24.1	C
	PM	26.6	C	21.8	C	22.7	C
6) Olympic Parkway/ Olympic Vista Road	AM	32.3	C	36.9	D	37.1	D
	PM	27.8	C	28.4	C	28.4	C
7) Olympic Parkway/ Project Driveway. ^e	AM	C	C	C	C	9.3	A
	PM	C	C	C	C	9.6	A
8) Olympic Parkway/ Wueste Road	AM	18.5	B	18.8	B	19.8	B
	PM	20.3	C	20.3	C	20.6	C

Footnotes:

- a. Average delay in seconds per vehicle.
- b. Level of service.
- c. Intersection does not exist.
- d. Currently the south leg is not fully open to traffic. For Year 2006, the ultimate geometry is assumed.
- e. Analyzed as an unsignalized intersection. Operations for the minor street left-turn movement are reported.

Source: LLG Report. August 16, 2005.

Table 5.5-8, Street Segment Operations – Scenarios 1 and 2, summarizes the key segment operations in the study area for Scenario 1. With the addition of the growth factor but without the project and SR-125, all of the key segments are calculated to continue to operate at LOS A .

TABLE 5.5-8
Street Segment Operations – Scenarios 1 And 2

Segment	Existing Classification	Los "C" Capacity	Existing		Scenario 1 (Year 2006 Without Project)		Scenario 2 (Year 2006 With Proposed Project)	
			Volume	LOS	Volume	LOS	Volume	LOS
Olympic Parkway East Palomar St. to EastLake Parkway	Prime Arterial (6L)	50,000	25,400	A	26,430	A	27,950	A
EastLake Parkway to Hunte Parkway	Prime Arterial (6L)	50,000	10,700	A	11,130	A	12,650	A
Hunte Parkway to Wueste Road	Major Arterial (4L)	30,000	6,000	A	6,240	A	7,960	A

Source: LLG Report. August 16, 2005.

Scenario 2 – Year 2006 without SR-125 with 5% Growth and With Proposed Project

The proposed project traffic volumes were added to the Scenario 1 traffic volumes to obtain Scenario 2 traffic volumes. *Figure 5.5-5, Year 2006 With Project Traffic Volumes AM/PM Peak Hours and ADT's*, depicts the Scenario 2 traffic volumes with the proposed project but without SR-125. *Table 5.5-7, Near-Term Intersection Operations*, summarizes the peak hour intersection operations for the Year 2006 + growth with the project condition. With the addition of project traffic, all key signalized intersections are calculated to continue to operate at LOS D or better conditions. As indicated in the Threshold of Significance, maintenance of at least a level of service D or greater for intersection operation would result in a less than significant impact.

Table 5.5-8, Street Segment Operations – Scenarios 1 and 2, summarizes the key segment operations in the study area for the Year 2006 + growth with the project condition but without SR-125. With the addition of the project traffic, all of the key segments are calculated to operate at LOS A. As indicated in the Thresholds of Significance, maintenance of at least LOS D or greater for street segment operations would result in a less than significant impact. Although the traffic volumes increased at intersections and along segments between Scenario 1 and Scenario 2, the LOS for the various intersections and segments were not significantly affected by the addition of the proposed project in the year 2006.

Figure 5.5-5, Year 2006 With Project Traffic Volumes AM/PM Peak Hours and ADT's

Scenario 3 – Year 2010 with SR-125 and with Adopted Land Uses

Table 5.5-9, *Near-Term Intersection Operations*, summarizes the peak hour intersection operations for the Year 2010 with SR125 and with the adopted land use. All key intersections are calculated to continue to operate at LOS D or better conditions. However, the northbound left-turn movement at the Olympic Parkway/Project driveway intersection is calculated to operate at LOS F during the PM peak hour. This is considered a significant impact.

TABLE 5.5-9
Near-Term Intersection Operations

Intersection	Peak Period	Scenario 3 (Year 2010 With Adopted Land Uses)		Scenario 4 (Year 2010 With Proposed Project Land Uses)	
		Delay ^a	LOS ^b	Delay ^a	LOS ^b
1) Olympic Parkway/ East Palomar Street	AM	34.2	C	35.6	D
	PM	36.1	D	33.6	C
2) Olympic Parkway/SR-125 SB Ramps	AM	15.7	B	15.5	B
	PM	17.2	B	26.7	B
3) Olympic Parkway/SR-125 NB Ramps	AM	7.8	A	7.7	A
	PM	6.7	A	6.6	A
4) Olympic Parkway/ EastLake Parkway	AM	36.0	D	32.8	C
	PM	32.9	C	32.1	C
5) Olympic Parkway/ Hunte Parkway.	AM	31.2	C	30.3	C
	PM	28.0	C	27.2	C
6) Olympic Parkway/ Olympic Vista Road	AM	28.4	C	27.3	D
	PM	23.5	C	23.7	C
7) Olympic Parkway/ Project Driveway ^d NBL WBL NBL WBL	AM	18.7	C	16.5	C
	PM	8.3	A	8.1	A
				4.9 ^c	A ^c
		>80.0	F	52.1	F
		11.8	B	10.7	B
				4.0 ^c	A ^c
8) Olympic Parkway/ Wueste Road	AM	15.5	B	15.5	B
	PM	8.4	A	8.4	A

Footnotes:

- Average delay in seconds per vehicle.
- Level of service.
- Bold** indicates mitigated delay and LOS (with signalization).
- Analyzed as an unsignalized intersection. Operations for the minor street left-turn movement are reported.

Source: LLG Report. August 16, 2005.

Figure 5.5-6, Year 2010 with Adopted Land Uses Traffic Volumes AM/PM Peak Hours and ADT's, illustrates the Year 2010 with the adopted land uses traffic volumes. Table 5.5-10, Street Segment Operations - Scenarios 3 and 4, summarizes the key segment operations in the study area for the Year 2010 with SR-125 and with the adopted land use. All of the key segments are calculated to operate at LOS A or better except the segment between East Palomar Street and EastLake Parkway, which is calculated to operate at an acceptable LOS D.

TABLE 5.5-10
Street Segment Operations – Scenarios 3 And 4

Segment	Classification	Los "C" Capacity	Scenario 3 (Year 2010 with Adopted Land Uses)		Scenario 4 (Year 2010 with Proposed Project Land Uses)	
			Volume	LOS	Volume	LOS
Olympic Parkway East Palomar St. to EastLake Parkway	Prime Arterial (6L)	50,000	51,800	D	51,200	D
EastLake Parkway to Hunte Parkway	Prime Arterial (6L)	50,000	31,700	A	30,700	A
Hunte Parkway to Wueste Road	Major Arterial (4L)	30,000	23,800	A	22,500	A

Source: LLG Report. August 16, 2005.

Scenario 4 – Year 2010 with SR-125 and with Proposed Project Land Uses

The adopted land use traffic volumes were deducted from the Year 2010 traffic volumes, and the proposed project traffic volumes were then added to obtain Year 2010 with proposed project traffic volumes. Figure 5.5-7, Year 2010 with Proposed Project Traffic Volumes AM/PM Peak Hours and ADT's, depicts the Scenario 4 traffic volumes.

Table 5.5-9, Near-Term Intersection Operations, summarizes the peak hour intersection operations for Year 2010 with SR-125 and with the proposed project. All key intersections are calculated to continue to operate at LOS D or better conditions. The northbound left-turn movement at the Olympic Parkway/Project driveway intersection is calculated to operate at LOS F during the PM Peak Hour. Similar to Scenario 3, this impact is significant.

Figure 5.5-6, Year 2010 with Adopted Land Uses Traffic Volumes AM/PM Peak Hours and ADT's

Figure 5.5-7, Year 2010 with Proposed Project Traffic Volumes AM/PM Peak Hours and ADT's

When comparing Scenario 3 versus Scenario 4, intersection LOS remained the same for all intersections with the exception of Olympic Parkway/East Palomar Street and Olympic Parkway/Olympic Vista Road which both decreased from LOS C to LOS D in the AM peak hour. Additionally, the Olympic Parkway/EastLake Parkway LOS improved from LOS D to LOS C in the AM peak hour with the proposed land use. The change from adopted to proposed land use would not significantly degrade level of service on key intersections in the project area. Therefore, impacts on area intersections with the exception of the project driveway are less than significant.

Table 5.5-10, Street Segment Operations - Scenarios 3 and 4, summarizes the key segment operations in the study area for the Year 2010 with SR-125 and with the proposed land use. All of the key segments are calculated to operate at LOS A or better except the segment between East Palomar Street and EastLake Parkway, which is calculated to operate at an acceptable LOS D. A comparison of Scenarios 3 and 4 indicates that the change from adopted to proposed land use would not result in a significant impact on roadway segments in the near term.

Analysis of Long-term Scenarios

Scenario 5 – Buildout with SR-125 and with Adopted Land Uses

Figure 5.5-8, Buildout with Adopted Land Uses Traffic Volumes AM/PM Peak Hours & ADT's, depicts the Scenario 5 traffic volumes. *Table 5.5-11, Buildout Intersection Operations*, summarizes the peak hour intersection operations for this scenario. All key signalized intersections are calculated to continue operating at LOS D or better conditions. Similar to the earlier scenarios, the northbound left-turn movement at the Olympic Parkway/Project driveway intersection is calculated to operate at LOS F during the PM peak hour. This impact is considered significant.

Table 5.5-12, Street Segment Operations – Scenarios 5 and 6, summarizes the key segment operations in the study area for the buildout with SR-125 and with the adopted land use. All of the key segments are calculated to operate at LOS A or better except the segment between East Palomar Street and EastLake Parkway, which is calculated to operate at an acceptable LOS D.

Scenario 6 – Buildout with SR-125 and with the Proposed Project

The adopted land use traffic volumes were deducted from the buildout traffic volumes with adopted land uses traffic volumes (Scenario 5), and the proposed project traffic volumes were then added to obtain buildout with proposed project traffic volumes. *Figure 5.5-9, Buildout with Proposed Project Traffic Volumes AM/PM Peak Hours and ADT's*, depicts the Scenario 6 traffic volumes that were used to calculate buildout scenario levels of service.

Figure 5.5-8, Buildout with Adopted Land Uses Traffic Volumes AM/PM Peak Hours & ADT's

Figure 5.5-9, Buildout with Proposed Project Traffic Volumes AM/PM Peak Hours and ADT's

TABLE 5.5-11
Build-Out Intersection Operations

Intersection	Peak Period	Scenario 5 (Buildout With Adopted Land Uses)		Scenario 6 (Buildout With Proposed Project Land Uses)	
		Delay ^a	LOS ^b	Delay ^a	LOS ^b
1) Olympic Parkway/ East Palomar Street	AM	41.4	D	36.3	D
	PM	37.1	D	34.1	C
2) Olympic Parkway/ SR-125 SB Ramps	AM	19.2	B	16.6	B
	PM	22.7	C	21.2	B
3) Olympic Parkway/ SR-125 NB Ramps	AM	12.6	B	12.7	B
	PM	11.0	B	11.0	B
4) Olympic Parkway/ EastLake Parkway	AM	41.6	D	35.9	D
	PM	33.7	C	32.3	C
5) Olympic Parkway/ Hunte Parkway.	AM	39.3	D	38.5	D
	PM	35.3	D	31.9	C
6) Olympic Parkway/ Olympic Vista Road	AM	25.4	C	25.7	C
	PM	23.8	C	22.9	C
7) Olympic Parkway/ Project Driveway ^d	AM	21.7	C	21.8	C
				5.0 ^c	A ^c
	PM	>80.0	F	>80.0 4.1 ^c	F A ^c
8) Olympic Parkway/ Wueste Road	AM	10.8	B	10.8	B
	PM	12.0	B	7.8	A

Footnotes:

- a. Average delay in seconds per vehicle.
- b. Level of service.
- c. **Bold** indicates mitigated delay and LOS (with signalization).
- d. Analyzed as an unsignalized intersection. Operations for the minor street left-turn movement are reported.

Source: LLG Report. August 16, 2005.

TABLE 5.5-12
Street Segment Operations – Scenarios 5 and 6

Segment	Classification	Los "C" Capacity	Scenario 5 (Buildout with Adopted Land Uses)		Scenario 6 (Buildout with Proposed Project Land Uses)	
			Volume	LOS	Volume	LOS
Olympic Parkway East Palomar St. to EastLake Parkway	Prime Arterial (6L)	50,000	55,600	D	55,000	D
EastLake Parkway to Hunte Parkway	Prime Arterial (6L)	50,000	34,500	A	33,500	A
Hunte Parkway to Wueste Road	Major Arterial (4L)	30,000	33,100	A	31,800	A

Source: LLG Report. August 16, 2005.

Table 5.5-11, Buildout Intersection Operations, provides the peak hour intersection operations for the buildout with SR-125 and with the proposed project. All key intersections are calculated to continue to operate at LOS D or better conditions. Scenario 6 showed an improvement in LOS at the intersections of Olympic Parkway/East Palomar Street, Olympic Parkway/SR-125 SB Ramps, Olympic Parkway/Hunte Parkway, and Olympic Parkway/Wueste Road as compared to the approved land use. Similar to other scenarios, the northbound left-turn movement at the Olympic Parkway/Project driveway intersection is calculated to operate at LOS F during the PM peak hour. This impact is considered significant.

Table 5.5-12, Street Segment Operations – Scenarios 5 and 6, summarizes the key segment operations in the study area for buildout with SR-125 and with proposed project. All of the key segments are calculated to operate at LOS A or better except the segment between East Palomar Street and EastLake Parkway, which is calculated to operate at an acceptable LOS D. Segment operations between the two scenarios remained the same, even though traffic volumes decreased with Scenario 6. The change in land use would not result in significant impacts on street segment operations in the buildout scenarios.

Signal Analysis

As noted above, the northbound left-turn movement at the project access driveway is calculated to operate at LOS F with the proposed project in the year 2010 and buildout timeframes. While adequate levels of service are anticipated on “opening day”, as traffic volumes increase on Olympic Parkway, delays will increase by a large amount for vehicles exiting the project site and turning left. Improved operations could be achieved by either restricting access at the project driveway to westbound left-turns in, eastbound right-turns in and northbound right-turns out only with northbound left-turns out prohibited, or by signalizing the project driveway.

If left-turns out of the project site are prohibited at the project driveway, project traffic destined to the west would need to drive out of direction to the east from the project site and make an eastbound to westbound U-turn at the Olympic Parkway/Wueste Road intersection. Currently, eastbound to westbound U-turns are not possible at the Olympic Parkway/Wueste Road intersection since the width of Olympic Parkway from the raised median to the curb is only 34 feet which is not sufficient to complete U-turns. If redesigning the Olympic Parkway/Wueste Road intersection to allow eastbound to westbound U-turns is not completed, project traffic destined to the west would need to continue north to Otay Lakes Road via Lake Crest Drive, a residential street and travel out of direction to reach I-805. Providing adequate width for U-turns at the Olympic Parkway/Wueste Road intersection will require modification of the Olympic Parkway cross section, with widening of the pavement and redesigning of the traffic signal.

The two intersections adjacent to the project driveway are planned to be signalized. The Olympic Parkway/Wueste Road intersection is located approximately 400 feet east of the project driveway and the planned signal at the Olympic Training Center Driveway/Olympic Parkway intersection is located approximately 430 feet west of the project driveway. The City of Chula Vista required spacing for signalized intersections along four-lane major streets is 1,320 feet. The spacing between the project driveway and the signalized intersections in either direction along Olympic Parkway is 430 feet or less. The intersections along Olympic Parkway at the project driveway and at Wueste Road are T-intersections with no north leg. Therefore, maximum left-turn storage lengths of 430 feet at the Olympic Training Center Driveway and 400 feet at the project driveway can be provided. Olympic Parkway is a four-lane divided road terminating into a two-lane undivided road (Wueste Road). This section of Olympic Parkway acts as an access road and not an arterial carrying through traffic.

Optional Construction Road: A secondary access point is being considered by the applicant for the ingress and egress of construction vehicles during the construction phase of the proposed project. This access point would be located at the southern portion of the project site and would continue offsite in a southeastern direction until it connects to Wueste Road. It is estimated that approximately 25 percent of construction related traffic would access the project site through this access point once the first four buildings are constructed along Olympic Parkway. This optional construction access road would help alleviate construction-related traffic along Olympic Parkway and construction-related traffic interaction with onsite residents. Construction traffic would be minimal and sporadic in nature therefore LOS conditions on Wueste Road would not be significantly impacted. However, traffic safety issues may result as the temporary road outlets into a sharp curve in Wueste Road and would cross an existing bicycle and pedestrian trail. No other traffic impacts are anticipated due to the temporary nature of this construction access road.

Optional Pedestrian Trail: The proposed trail would be limited to pedestrian and bicycle use only. Therefore, the offsite trail would not result in a traffic impact.

5.5.5 Level of Significance Prior to Mitigation

The level of service at the project driveway and Olympic Parkway will degrade to F as a result of the project from vehicles entering and exiting the project, which would be a significant direct impact of the proposed project. The potential conflict between construction-related traffic and vehicular, pedestrian and bicycle traffic on Wueste Road and the adjacent trail would also be a significant direct impact of the optional construction access road.

5.5.6 Mitigation Measures

- 5.5-a Prior to approval of the grading plan, the applicant shall enter into an agreement to design, construct, and secure a fully actuated traffic signal including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaires at the Olympic Parkway/Project Driveway intersection. The design of the signal shall be to the satisfaction of the City Engineer and conform to City standards. The applicant shall provide the following intersection geometry:

Westbound: One left-turn lane (with 100 feet of storage) and two through lanes

Southbound: None

Northbound: One left-turn lane and one right-turn lane (With a storage length of 75 feet in each)

Eastbound: One shared through/right lane and one through lane.

A signal shall be installed at the project driveway and two outbound (northbound) lanes, one left-turn and one right-turn lane, and two inbound (southbound) lanes be provided.

- 5.5-b Prior to approval of building permits, the median opening on Olympic Parkway further shall be relocated west from its current location to accommodate the proposed project driveway.
- 5.5-c Prior to approval of building permits, a “No U Turn” sign for eastbound traffic on Olympic Parkway at the Olympic Parkway/Wueste Road intersection shall be installed.
- 5.5-d Prior to approval of the grading permit for the temporary construction access road, a Traffic Control Plan shall be prepared to the satisfaction of the City Engineer for the Wueste Road/access road intersection. The Traffic Control Plan shall be implemented for the duration of the use of the temporary access road. The Traffic Control Plan shall address methods to avoid conflicts between vehicles on Wueste Road/pedestrians and bicyclists on the trail adjacent to Wueste Road and construction vehicles entering and exiting the site.

5.5.7 Significance of Impacts After Mitigation

The Olympic Parkway/project driveway intersection would operate at LOS A in both the north- and westbound directions with the proposed mitigation. The required Traffic Control Plan would reduce potential impacts from construction vehicles interacting with vehicles and pedestrians/bicyclists on Wueste Road. Impacts would be mitigated to a level below significant.